

REMOTE SENSING OF ENVIRONMENT

An Interdisciplinary Journal

Volume 24, Number 1, February 1988

Contents

GREGG VANE (Pasadena, CA) AND ALEXANDER F. H. GOETZ (Boulder, CO)	
Terrestrial Imaging Spectroscopy I	1
FRED A. KRUSE (Denver, CO)	
Use of Airborne Imaging Spectrometer Data to Map Minerals Associated with Hydrothermally Altered Rocks in the Northern Grapevine Mountains, Nevada, and California	31
AMY HUTSINPILLAR (Reno, Nevada)	
Discrimination of Hydrothermal Alteration Mineral Assemblages at Virginia City, Nevada, Using the Airborne Imaging Spectrometer	53
SANDRA C. FELDMAN AND JAMES V. TARANIK (Reno, NV)	
Comparison of Techniques for Discriminating Hydrothermal Alteration Minerals with Airborne Imaging Spectrometer Data	67
DAVID L. PETERSON (Moffett Field, CA), JOHN D. ABER (Madison, WI), PAMELA A. MATSON, DON H. CARD, AND NANCY SWANBERG (Moffett Field, CA), CAROL WESSMAN (Madison, WI), AND MICHAEL SPANNER (Moffett Field, CA)	
Remote Sensing of Forest Canopy and Leaf Biochemical Contents	85
B. N. ROCK (Durham, NH), T. HOSHIZAKI (Pasadena, CA), AND J. R. MILLER (Ontario, Canada)	
Comparison of <i>In Situ</i> and Airborne Spectral Measurements of the Blue Shift Associated with Forest Decline	109
KARIN HERRMANN (Munich, Federal Republic of Germany), BARRETT N. ROCK (Durham, NH), ULRICH AMMER (Munich, Federal Republic of Germany), AND HELEN N. PALEY (Pasadena, CA)	
Preliminary Assessment of Airborne Imaging Spectrometer and Airborne Thematic Mapper Data Acquired for Forest Decline Areas in the Federal Republic of Germany	129
CARLE M. PIETERS AND JOHN F. MUSTARD (Providence, RI)	
Exploration of Crustal/Mantle Material for the Earth and Moon Using Reflectance Spectroscopy	151
J. E. CONEL, S. ADAMS, R. E. ALLEY, G. HOOVER, AND S. SCHULTZ (Pasadena, CA)	
AIS Radiometry and the Problem of Contamination from Mixed Spectral Orders	179
ALAN S. MAZER, MIKI MARTIN, MEEMONG LEE, AND JERRY E. SOLOMON (Pasadena, CA)	
Image Processing Software for Imaging Spectrometry Data Analysis	201
Announcement	211

REMOTE SENSING OF ENVIRONMENT

An Interdisciplinary Journal

Volume 24, Number 2, March 1988

Contents

- J. K. ROSS AND A. L. MARSHAK (Estonia, USSR)
Calculation of Canopy Bidirectional Reflectance Using the Monte Carlo Method 213
- JAMES E. VOGELMANN AND BARRETT N. ROCK (Pasadena, CA)
Assessing Forest Damage in High-Elevation Coniferous Forests in Vermont and New Hampshire Using Thematic Mapper Data 227
- ROSS NELSON (Greenbelt, MD), WILLIAM KRABILL (Wallops Isl., VA), AND JOHN TONELLI (Tuxedo Park, NY)
Estimating Forest Biomass and Volume Using Airborne Laser Data 247
- M. V. PARIS AND C. G. JUSTUS (Atlanta, GA)
A Cloudy-Sky Radiative Transfer Model Suitable for Calibration of Satellite Sensors 269
- GEORGE A. LESHKEVICH (Ann Arbor, MI)
SHORT COMMUNICATIONS
Goniometric Measurements of a Spray-painted Barium Sulfate Reference Panel 287
- FRANCOIS BECKER AND BHASKAR J. CHOUDHURY (Greenbelt, MD)
Relative Sensitivity of Normalized Difference Vegetation Index (NDVI) and Microwave Polarization Difference Index (MPDI) for Vegetation and Desertification Monitoring 297
- K. MASUDA, T. TAKASHIMA, AND Y. TAKAYAMA (Ibaraki, Japan)
Emissivity of Pure and Sea Waters for the Model Sea Surface in the Infrared Window Regions 313
- MANFRED OWE AND ALFRED CHANG (Greenbelt, MD) AND ROBERT E. GOLUS (Lanham, MD)
Estimating Surface Soil Moisture from Satellite Microwave Measurements and a Satellite Derived Vegetation Index 331

(cont.)

CONTENTS

STEVEN W. RUNNING AND RAMAKRISHNA R. NEMANI (Missoula, MT)

Relating Seasonal Patterns of the AVHRR Vegetation Index to
Simulated Photosynthesis and Transpiration of Forests in
Different Climates

347

A. S. HOPE (San Diego, CA)

Estimation of Wheat Canopy Resistance Using Combined Remotely
Sensed Spectral Reflectance and Thermal Observations

369

REMOTE SENSING OF ENVIRONMENT

An Interdisciplinary Journal

Volume 24, Number 3, April 1988

Contents

RICHARD P. STUMPF (Washington, D.C.) AND MARY A. TYLER (Columbia, MD) Satellite Detection of Bloom and Pigment Distributions in Estuaries	385
LARS L. PIERCE AND RUSSELL G. CONGALTON (Berkeley, CA) A Methodology for Mapping Forest Latent Flux Heat Densities Using Remote Sensing	405
JOHN C. PRICE (Beltsville, MD) An Update on Visible and Near Infrared Calibration of Satellite Instruments	419
ALAIN ROYER AND LISE CHARBONNEAU (Quebec, Canada) AND PHILIPPE M. TEILLET (Ottawa, Canada) Interannual Landsat-MSS Reflectance Variation in an Urbanized Temperate Zone	423
G. ASRAR, T. R. HARRIS, AND R. L. LAPITAN (Manhattan, KS) AND D. I. COOPER (Tucson, AZ) Radiative Surface Temperatures of the Burned and Unburned Areas in a Tallgrass Prairie	447
PAT S. CHAVEZ, JR. (Flagstaff, AZ) An Improved Dark-Object Subtraction Technique for Atmospheric Scattering Correction of Multispectral Data	459
DONALD E. PETZOLD AND SAMUEL N. GOWARD (College Park, MD) Reflectance Spectra of Subarctic Lichens	481
PAUL J. CURRAN (Sheffield, UK) The Semivariogram in Remote Sensing: An Introduction	493
SHORT COMMUNICATION	
S. M. SINGH (Reading, England) Brightness Temperature Algorithms for Landsat Thematic Mapper Data	509
AUTHOR INDEX TO VOLUME 24	513
SUBJECT INDEX TO VOLUME 24	515
VOLUME CONTENTS	